

b. Cheeks and ears vinous.

c'. Forehead whitish vinous, sides of head pale  
 vinous ..... *krynickii* Kalenicz. Caucasus.

d'. Forehead quite black, sides of head rich vinous.  
*nigrifrons*, n. sp. Armenia.

II. Occipital crest-feathers black, narrowly margined  
 with rufous.

c. Sides of head rufous, general coloration intense,  
 vinaceous..... *caspius* Seebohm. Talysh.

d. Sides of head white, general colouring pale, greyish.  
*whitakeri* Hart. Morocco.

Other allied forms (such as *G. minor* Verr., *G. hyrcanus* Blanf., &c.) cannot possibly be described as having the black colour prevailing on the crest.

XXVII.—*Field-Notes on the Birds of Chinkiang, Lower Yangtse Basin.*—Part I. By J. D. D. LA TOUCHE, C.M.Z.S., M.B.O.U.

IN 'The Ibis' for 1891 (pp. 316-359 & pp. 381-510) Mr. F. W. Styan gave a very complete and accurate account of the Birds of the Lower Yangtse Basin, which he further augmented by supplementary papers in 1894 and 1899. The following pages, therefore, add but few species to the general list of the birds of that district, and consist mainly of local notes compiled during a five years' residence at Chinkiang. Local notes and lists of this kind are, I consider, necessary if it is desired to obtain an accurate knowledge of the distribution of birds in China, where the climate and physical features of the country vary to a far greater extent than is generally supposed.

Chinkiang, one of the most important prefecture-cities on the Lower Yangtse, is situated on the south bank of the river at its most northern bend, about 150 miles from the sea (lat. 32° 13' N. by long 119° 25' E.). The country on the north bank is a vast cultivated plain, much intersected by tidal creeks and canals. A few detached hills rise about twenty miles to the west, and there is another low range

about half that distance to the east of Chinkiang. On the south bank, at the back of the city, a rough plateau of loess or yellow earth-hills, greatly cut up by cultivated valleys, extends for a few miles behind the suburbs. This loess country is bounded on the east and about seven miles to the south of the city by ranges of steep hills, some of which continue along the south bank of the river to Nanking, while other shorter ranges run in a southerly direction nearly to the boundary of the province of Chekiang, according to the latest map of Kiangsu Province issued at Sikawei by the Jesuits. The loess hills are bare save for grass or brushwood and a few plantations of scrub-oaks and pines. The hills proper, on the contrary, are well-timbered, and are in places covered with good-sized woods of oaks, chestnuts, and pines, generally with a thick undergrowth of bracken, scrub-oak, and various shrubs, which is, however, cut for fuel during the winter months.

The plain, when viewed in summer from the heights or from the river-banks, has the appearance of being thickly wooded. This is due to the rows of pollard-willows which everywhere border the fields, to the clumps of high trees and bamboo-shrubberies planted along the ponds at the backs of the villages, and to the rows of tall elms, willows, *Fortunea*, and other large trees lining the high embankments which traverse the lowlands in every direction. Changes of currents have within the last fifty years caused great alterations about Chinkiang, the river having eaten its way along the northern bank, and having receded so far from its original course on the south just above Chinkiang, that cultivated fields and dry reed-beds are now found where thirty years ago there existed a good anchorage for ships. The appearance of the country is also very different from what it was in the early sixties of the nineteenth century, when Captain Blakiston made his celebrated journey to Pingshan on the Upper River. At that time Chinkiang and the surrounding country had been utterly devastated by the Taiping rebels, and the wonderful fertility of this part of China is demonstrated by the fact that, when Blakiston first passed Chinkiang, what struck him most was "the entire absence of trees," and

that, "saving on Silver Island, where the temples and groves had in some way or other escaped the general ruin, not a tree was visible." Thus the magnificent timber which is now to be seen on the alluvial plains is the growth of only forty years. The woods on the hills are even more recent, and the best of these were planted by the monks of some Buddhist monasteries, who for this noble work deserve the gratitude of all lovers of nature.

It is interesting to compare my Chinkiang list, based on observations made within a radius of fifteen miles from the city, with Styan's general list of Lower Yangtse Birds, as it shews that in Eastern China the Palæarctic and Oriental Regions meet as nearly as possible at Chinkiang. It will be noticed that some southern hill-birds (such as *Pomatorhinus styani*, *Stachyridopsis ruficeps*, Forktails, *Rhyacornis fuliginosa*, the Dipper, Whistling Thrush, and Chinese Jay), which might have been expected to wander as far as the Chinkiang hills, do not occur there even as stragglers, while such northern birds as *Gecinus canus* and *Parus palustris* are here at their southern breeding-limit. With regard to summer-birds, *Pericrocotus cantonensis* and *Xanthopygia tricolor* are the most notable. Evidently the latter does not breed at Shanghai, Kiukiang, or Hankow, the three points in the Lower Yangtse Basin where Styan has resided during the summer; so that Chinkiang is the southern breeding-limit of this bird. As to the Minivet, the finding of a single breeding pair shews that Chinkiang is the northern breeding-limit of this species. The migratory land-birds of Chinkiang are all mentioned in Styan's list, with the exception of *Locustella fasciolata*, *Phylloscopus tenellipes*, and *Cerchneis amurensis*. The first of these seems to be a rare bird in China, and so far Amoy and Chinkiang are the only places where it has been found. The second has already been taken by Père David near Kiukiang. The occurrence of the Falcon in South-eastern China and near the Yangtse delta is exceptional; its route is doubtless chiefly through Central and South-western China. The distribution of several of the other migrants on the Yangtse is irregular, as might be expected. Thus *Phyllo-*

*scopus coronatus*, which Styan states to be rare, is abundant at Chinkiang. Others, such as *Larvivera cyanea*, *Cyanoptila cyanomelæna*, the Yellow Wagtails, &c., &c., are of rarer occurrence than in the central parts of the Lower Yangtse Basin. In the same way we find certain differences among the winter visitants, the most notable of which is the complete absence of *Anthus cervinus* from the Chinkiang district.

The following stray or doubtful birds of Styan's list occur at Chinkiang:—*Geocichla sibirica* (regular autumn migrant), *Anorthura fumigata* (regular winter visitant), *Coccothraustes japonicus* (migrant, taken once), *Astur soloensis* (regular migrant).

My list of water-birds is very incomplete, and there is no doubt that most of those mentioned by Styan occur at Chinkiang on migration or in winter. The want of local native collectors has prevented me from adding more species.

I am greatly indebted to Mr. C. B. Rickett for having most kindly sent me, in the spring of 1902, his collectors Tang Wang-Wang and Tang Chunkai. These men stayed at Chinkiang for two months, and made a very complete collection of the spring-migrants and summer-birds there. They also cleared up the mystery of *Cettia canturiens*, besides procuring a number of rare migrants which otherwise would not have appeared in the Chinkiang list.

#### 1. CORVUS TORQUATUS Less.

Styan, *Ibis*, 1891, p. 357; La Touche & Rickett, *Ibis*, 1905, p. 25.

The Collared Crow is a very common resident at Chinkiang. With the exception of the Magpie, it is the earliest breeder of the Crow-tribe in that part of China. It nests in pine-woods on the hills and on tall trees on the plain, often close to villages and country-houses, or even in the suburbs. Building commences in February, and nests are often completed by the beginning of March. The eggs are laid in March or early in April. So far as I know, the greatest number in a clutch is four (clutches taken at Foochow generally contained three eggs).

The eggs have already been described by Rickett and

myself. We have, however, omitted to state that they have a tendency to be very heavily blotched, although, of course, as in all Crows' eggs, lightly-spotted varieties occur. Thirteen eggs, taken at Chinkiang, average  $1.75 \times 1.20''$ . The largest of these is  $1.94 \times 1.20''$  and the smallest  $1.57 \times 1.18''$ . The diameter ranges from  $1.26$  to  $1.13''$ .

## 2. CORVUS MACRORHYNCHUS Wagl.

Styan, Ibis, 1891, p. 358; La Touche & Rickett, Ibis, 1905, p. 26.

This Crow is also a common resident. It breeds in much the same situations and localities as the Collared Crow, and is even more confiding, as I have seen a pair nesting in the chimney of a foreign house in the midst of a crowded suburb. Nest-building takes place in March and April. I have eggs taken on April 16, 20, and 24; the former fresh, the latter slightly incubated. The pair which was robbed on April 16 built again soon afterwards in a tall cypress tree in the Custom House garden, and on May 15 had laid three slightly incubated eggs. The nest is lined with cow-hair, I believe. Five eggs compose the full clutch. The texture of the shell is rather smoother than that of the eggs of the Collared Crow. Eighteen eggs taken at Chinkiang are all fairly uniform both in ground-colour and markings. The ground-colour is, in every specimen but one, of a light bluish green, blue in comparison with the eggs of *C. torquatus*. The surface-marks are sap-green, small and rather streaky or elongated. One egg of a clutch taken by my men has a rough cap of underlying reddish-grey confluent spots, with a few of the same sort on the rest of the shell. Another has the ground-colour suffused with green. The remaining three resemble the ordinary type, but have besides a number of blotches scattered over them. All these eighteen eggs have underlying greyish-red spots, which do not interfere with the general blue and-green aspect of the egg. The shape is ovate or elongated ovate; none incline to an oval shape. They average  $1.67 \times 1.14''$ . The largest is  $1.76 \times 1.11''$ , the smallest  $1.56 \times 1.11''$ . The largest diameter is  $1.20''$ , the smallest  $1.06''$ .

3. *CORVUS PASTINATOR* Gould.

Styan, *Ibis*, 1891, p. 358.

The Eastern Rook is resident and extremely abundant about Chinkingang. It breeds every year on the trees lining the bund, just outside the gates of the Custom House, and also, at Golden Island, on the trees outside the Temple gates. The sites for the nests of the Bund Rookery are generally decided upon at the end of January, the places chosen being occupied by the birds for some days previous to building, and the first nests are finished by the end of March. The building of outlying nests and of those of the younger (?) birds is not allowed to proceed until the first half-dozen or so of the early nests—probably those of the leading members of the community—have approached completion, and the former are not ready before the middle of April.

Two clutches, of four and five eggs respectively, taken from nests in this rookery on April 9, shew great variation—from greenish blue almost unmarked to dark eggs so thickly streaked with sepia-brown and sap-green that the ground-colour is quite hidden. The ground-colour is greenish blue, bluish grey, or dull green; the surface-marks are in the form of longitudinal streaks, specks, or, more rarely, spots, dull brown, sepia, or sap-green in colour, and there are, on one egg, underlying blotches of pale pinkish violet. Several of the eggs are suffused or smudged all over with sap-green, dark brown, or both. The appearance of these nine eggs is very different from that of the eggs of *C. torquatus* and *C. macrorhynchus*. The eggs of clutch A (four, nearly fresh) are elongated ovate in shape and average  $1.72 \times 1.09''$ . The largest is  $1.78 \times 1.10''$  and the smallest  $1.65 \times 1.06''$ . The eggs composing clutch B (five, incubated) are in shape broad ovate (3), ovate, and rather elongated ovate. They average  $1.54 \times 1.11''$ ; the largest is  $1.66 \times 1.12''$  and the smallest  $1.47 \times 1.15''$ .

4. *CORVUS DAURICUS* Pall.

Styan, *Ibis*, 1891, p. 358.

Extremely abundant throughout the winter. It arrives in October and leaves early in spring.

## 5. CORVUS NEGLECTUS Schl.

Styan, Ibis, 1891, p. 358.

Much less common than the preceding species. A few individuals are generally to be observed among the flocks of *C. dauricus*, and I have seen small companies wholly composed of these birds. Both species mingle with the Rooks in the fields. I have noticed this Jackdaw until late in March. The stomachs of all the examples of this and the preceding species examined by me at Chinkiang contained chiefly paddy or wheat, occasionally seeds.

## 6. PICA CAUDATA L.

Styan, Ibis, 1891, p. 358.

The Magpie is, with the Sparrow, perhaps the most abundant of our residents. An almost uninterrupted stream of these birds may be seen in the late afternoon flying over Chinkiang on their way from their feeding-grounds to their roosting-places. They begin to build early in the year, but fresh eggs are to be found throughout April. The nests at Chinkiang are not always domed, as I have three eggs taken from a nest which the finders assured me was open, while a fourth was taken in my presence from an apparently perfectly open nest.

## 7. CYANOPOLIUS CYANUS (Pall.).

Styan, Ibis, 1891, p. 359.

The Blue-winged Magpie is very common in the plains, while in winter parties frequent copses and gardens about the villages and are also to be met with along the willow-bordered creeks and ponds. It breeds in colonies on high trees around the villages of the plain. The nest is generally difficult of access, being nearly always placed high up in a tree, and as a rule in a thin fork some distance from the trunk. I have not had an opportunity of watching the building of the nest, but it is generally completed about May 20. A number of nests examined on May 29 were either empty or contained one egg, but on the same day I obtained from a native a clutch of four eggs. The nests are built of sticks outwardly; and within there is a thick lining, or, more properly, an inner

nest composed of moss, cows' hair, wool, fibres, and twigs. A good deal of mud is used as a base to the inner nest. The inner diameter of one lining, which I measured, was  $5\frac{1}{2}$  in., and the depth about  $1\frac{1}{2}$  in. Besides the clutch mentioned above I have obtained fresh eggs on May 26, a few that were fresh and a number that were incubated on June 14. Two eggs brought to me on July 11 were, one incubated, the other rotten.

Out of twenty-seven eggs taken, eight have the ground-colour of a light greenish grey, seventeen of a brownish-yellow clay-colour or pale olive-brown, and one of an intermediate shade. The markings consist of roundish spots and specks, or sometimes of short lines, of brown and purplish grey, the latter often on the surface as well as beneath it. As a rule every egg has also a few surface-specks of very dark brown. The shape is ovate or very rarely elongated ovate. The twenty-seven eggs in my collection average  $1.08 \times 0.83''$ ; the largest is  $1.16 \times 0.87''$  and the smallest  $1.00 \times 0.79''$ .

#### 8. *UROCISSA SINENSIS* (L.).

Styan, *Ibis*, 1891, p. 359; La Touche, *Ibis*, 1900, p. 40; La Touche & Rickett, *Ibis*, 1905, p. 26.

This bird is common on the hills. It also occurs on the plain and occasionally appears in the British Concession at Chinkiang. Two fresh eggs were brought to me on June 12; they resemble those described in 'The *Ibis*' (1900, p. 40).

#### 9. *PARUS MINOR* T. & S.

Styan, *Ibis*, 1891, p. 341; La Touche, *Ibis*, 1899, p. 401; La Touche & Rickett, *Ibis*, 1905, p. 27.

The common Tit of the locality. I have three eggs taken on May 20 from a hole in a tree, which were quite fresh; they are pure white with rather large spots and specks of two shades of light red over underlying violet-reddish markings. They measure  $0.65 \times 0.50''$ ,  $0.64 \times 0.50''$ , and  $0.64 \times 0.49''$ . They differ from those obtained in Fohkien in having underlying markings and in their lesser size.

I have also a young bird nearly full-grown which was shot



on May 9, so that no doubt two broods are reared in the season.

10. *PARUS PALUSTRIS* L.

The Marsh-Tit, which has not before been recorded from the Lower Yangtse, is resident in the Chinkiang country, but is not abundant there. I have seen it both in summer and in winter on the plain; and on May 20, 1900, I shot an example in a wood, where it probably breeds every season, as the collectors shot another two years afterwards at the same place and on the same date.

Specimens obtained at Chinkiang do not differ from a Chefoo specimen given to me by Mr. Styan.

11. *ACREDULA GLAUCOGULARIS* (Gould).

Styan, *Ibis*, 1891, p. 342.

This Long-tailed Tit is a very common resident. It breeds in March and April. I have obtained eggs or seen nests on the following dates:—

March 22 (new nest, no eggs); March 22 (1 fresh egg, nest half torn down); March 30 (7 eggs, incubated); April 9 (7 eggs, fresh); April 9 (8 eggs, incubated); April 10 (five eggs, fresh); April 10 (two eggs, fresh); April 10 (new nest, not finished); April 14 (6 eggs, hard-set); April 18 (nest, with very young birds); April 20 (4 eggs, incubated); April 20 (8 eggs, nearly hard-set); April 26 (nest, with half-fledged birds); April 29 (nest, with young birds, feathers in quill).

On April 20 I saw a family of young birds travelling along a hedge and on May 20 I shot two in their first plumage.

The nest is generally placed in a cypress, a common tree about Chinkiang, but not infrequently in a willow. That seen on April 26 was in a dwarf pine, that on April 29 had been taken from a tea-plant, besides which I have seen an old nest on some dwarf bamboos in a wooded ravine. The fabric is domed, of a more or less roundish-oval or oblong shape, with the aperture near the top. It is made of moss, lichen, scraps of grass, &c., bound with cobwebs, and has a very thick lining of chickens' or wild doves' feathers. The measure-

ments of seven nests are: outer length from 6 to 8 in., outer greatest breadth  $2\frac{3}{4} \times 3$  in. to  $3\frac{3}{4} \times 4$  in., circumference  $9\frac{1}{4}$  to 11 in.; inner height  $3\frac{1}{4}$  to 4 in., inner diameter 2 to  $2\frac{1}{2}$  in.; aperture 1 in., base of aperture to base of nest  $3\frac{1}{2}$  to 4 in.

The number of eggs in a clutch is from six to eight. In colour they are pinkish white or pure white, minutely speckled and streaked, as a rule, with pale Indian-red or violet-red, the marks being nearly always more numerous about the larger end. One of my clutches of eight eggs has hardly any sign of speckling and has faded to a dull greyish white, with a few faint specks in one or more cases. Another clutch of eight eggs is somewhat profusely speckled and streaked with pale red and underlying violet-red, seven of the eggs having a thick zone of confluent marks round the larger end. When fresh the eggs have no gloss. They vary from a short broad-ovate shape to a long ovate, but are usually almost perfectly ovate. Fifty-three eggs average  $0.56 \times 0.44''$ . The largest of these is  $0.60 \times 0.46''$  and the smallest  $0.50 \times 0.42''$ .

The young birds shot on May 20 answer so closely to the description of *A. vinacea* (Verr.) that it appears to me highly probable that *A. vinacea* was founded on the young of *A. glaucogularis*. Père David, in 'Les Oiseaux de la Chine,' p. 292, while remarking on the difference of plumage between *A. vinacea* and *A. glaucogularis*, which led him to consider the former a good species, apparently suspected that this might be the case, and ended his remarks on *A. vinacea* with these words: "la question néanmoins mérite d'être étudiée."

## 12. ÆGITHALUS CONSOBRINUS Swinhoe.

Styan, Ibis, 1894, p. 333.

On April 27, 1900, I shot a solitary male of this species, which was perched in a small tree by a pond in the loess country. I met with no other specimens until February 15, three years later, when I saw hundreds in the reeds by the river a few miles below Chinkiang. They were feeding among the reeds, and three which I shot had their stomachs full of seeds. Now and then a numerous party would fly up

with a cry not unlike that of a *Zosterops*, and after wheeling about in mid-air would settle again in a neighbouring patch of reeds. Although I did not happen to see any of the birds during subsequent shooting-expeditions, there is no doubt that they are to be found every winter in the reed-beds on the river.

### 13. SUTHORA WEBBIANA Gray.

Styan, *Ibis*, 1891, p. 336; La Touche, *Ibis*, 1899, p. 189.

A breeding pair shot on May 7 and a male shot on June 10 differ only from the spring and summer birds from N.W. Fohkien in not having the red of the head and neck extended so far down the back. Three birds shot in April are very much duller, while six skins obtained in winter are intermediate between Shanghai and N.W. Fohkien specimens, and are very like Anhwei skins. Chinkiang birds would thus appear to be, on the whole, a less bright form of *Suthora webbiana* (*Suthora suffusa* Sw.) of Fohkien. I must here correct a slip which I made in my notes on this bird ('*Ibis*,' 1899, p. 189). I then wrote that all the Kuatun breeding birds "have the intensely ruddy head and neck well separated from the grey-brown back"; this should read "have the intensely ruddy head, neck, and upper back, in worn specimens, well separated from the lower back." Birds in fresh plumage have the lower back also somewhat suffused with red. The difference between N.W. Fohkien winter- and summer-birds is that the head, neck, and upper-back are browner in the former.

This *Suthora* is extremely common about Chinkiang, both on the scrub-covered hills and in the plain. It breeds in April, May, and throughout June. Without doubt two broods are reared, as full-fledged young are about in May and June. I have found nests in nettle-beds in the plain and on reeds in dry and flooded reed-beds. Two of those found on reeds were built at a height of about ten feet from the ground, but, as a rule, the nests are placed no higher than four or five feet from the ground or water. Nests taken from

the nettle-beds resembled those from Kuatun, and were made of coarse grass, reed, and bamboo-leaves, bound with cobwebs, and lined with fine grass-stems. The two nests from the reed-beds mentioned above were made of strips of whitish reed-skin, bound with cobwebs, and lined with fine grass-stems and a little hair. As in N.W. Fohkien, blue eggs are the commonest at Chinkiang, but I have also obtained there a number of the pale-coloured varieties.

14. *PARADOXORNIS HEUDEI* David.

Styan, *Ibis*, 1891, p. 336.

This handsome Crow-Tit is very common in winter in the reed-beds a few miles below Chinkiang. I have also seen it in the bare reed-fields after the crop has been cut, and in bushes and trees in the vicinity. When travelling and feeding in the reed-beds, the birds' constantly repeated trilling notes are heard a long way off, and this, coupled with the loud noise made by their wings when flitting about the reeds, betrays their presence at once. I was unable to find any nests, nor did I see any specimens in summer. They feed on the ground as well as on the reeds.

15. *TROCHALOPTERON CANORUM* (L.).

Styan, *Ibis*, 1891, p. 334; La Touche, *Ibis*, 1899, p. 180.

Common on the higher wooded hills, but also found in copses on the plain. It breeds in April, May, June, and July.

A nest which I took on May 5 was placed in a small holly-bush in a wooded ravine. It contained four incubated eggs. This nest was composed of leaves, coarse grass-blades, and twigs, and had a lining of pine-needles. The measurements were: outer diameter about  $5\frac{1}{2} \times 6$  in., outer depth  $4\frac{1}{2}$  in., inner diameter  $3\frac{1}{4}$  in., inner depth about  $2\frac{3}{4}$  in. Twelve eggs taken near Chinkiang average  $1.04 \times 0.81''$ ; the largest is  $1.10 \times 0.83''$  and the smallest  $0.95 \times 0.80''$ .

16. *DRYONASTES PERSPICILLATUS* (Gm.).

Styan, *Ibis*, 1891, p. 334; La Touche & Rickett, *Ibis*, 1905, p. 28.

Abundant and resident. It breeds in the bamboo-copses

round about the villages and also in the reed-beds. The nests which I have seen in the former were all placed on bamboos at a considerable height from the ground—twelve feet at least. Two half-torn-down and deserted nests found on June 10 in a patch of reeds were about five feet from the ground: one contained three slightly incubated eggs, the other was empty. Fresh eggs were brought to me on June 21, July 11 and July 13, so that no doubt two broods are reared here. The Chinkiang nests which I have seen resemble those taken at Foochow, but ten eggs taken at Chinkiang are much larger than Foochow eggs. They average  $1.14 \times 0.86''$ . The longest is  $1.20 \times 0.86''$ , the shortest  $1.07 \times 0.85''$ .

17. *ZOSTEROPS SIMPLEX* Swinhoe.

Styan, *Ibis*, 1891, p. 352; La Touche, *Ibis*, 1899, p. 431;  
La Touche & Rickett, *Ibis*, 1905, p. 31.

Common in summer. Arrives in the latter half of April, and remains until the end of September. I have seen full-fledged young being hawked about on May 21. This bird is extremely common in the gardens during September.

18. *PYCNONOTUS SINENSIS* (Gm.).

Styan, *Ibis*, 1891, p. 345; La Touche & Rickett, *Ibis*,  
1905, p. 31.

Very abundant. Eggs may be obtained up to August 17, and I have seen a nest with unfledged young on September 4. Four eggs obtained from natives on June 17 and two on July 17 are very different from the rest of my series. The ground-colour is pink, and they have heavy blotches, chiefly on the larger half of the egg, of a dark claret-colour and violet-grey over pale grey underlying blotches. They average  $0.91 \times 0.695''$ , the largest being  $0.95 \times 0.72''$ , and the smallest  $0.88 \times 0.68''$ . The nests were normal, so that I have no hesitation in referring them to this common species.

This Bulbul has, at Chinkiang during the breeding-season, a note which I have not heard it utter in the south. It is a very favourite cage-bird with the Chinkiang natives.

19. *PYCNONOTUS XANTHORRHOS* Andersson.

Styan, *Ibis*, 1891, p. 345.

This Bulbul is rather a scarce resident at Chinkiang. I bought on July 7 a full-fledged nestling, which I kept as a cage-bird. I was shown an empty nest placed high in a hedge, but when I returned on June 5 to take the eggs it had disappeared.

20. *SPIZIXOS SEMITORQUES* Swinhoe.

Styan, *Ibis*, 1891, p. 345.

This handsome Bulbul is a common resident, found both on the lower wooded hills and in the plain. I have two clutches of eggs. The first, consisting of four specimens, was brought to me together with the remains of the nest on June 12, 1903. The following year, on June 18, I took a nest containing three fresh eggs from a small willow growing on the edge of a pond between a bamboo-copse and a patch of reeds. It was suspended between the trunk of the tree and a thin twig that grew up nearly parallel to it, and was very lightly fastened to the twig by a couple of tendrils and a few cobwebs. It is a thin, flattish, and fragile-looking cup, made of small twigs, tendrils, and a few seeded reed flower-tops. The inner edge of the cup is made of the last-named. It has a very thin lining of tendrils and human hair; one long weed-stalk hangs out from the edge, and a certain amount of floss-silk is twisted amongst the outer materials. It can be seen through in all its parts. The outer height is about 3 in., the outer diameter about 5 in., the inner depth  $1\frac{1}{2}$  in., and the inner diameter  $2\frac{1}{2}$  in. I have another nest which was built by a pair of birds on a small cypress in our garden. They began it on the 18th of July, and finished it on the 21st. Both birds joined in the work. They were by no means shy and were very noisy. On the 26th the female was sitting on the nest, but next day the birds had gone. They were probably frightened away by cats, as the site was very much exposed and just below a neighbour's roof. This nest is of the same style as that described above. It is made of thin twigs, grass-

stems, and one blade of coarse grass, and is lined with very fine tendrils, grass-roots, and dark brown fibres. It has also a long weed-stem hanging from its side. It measures: outer height just under 3 in., outer diameter  $4\frac{1}{2}$  in., inner depth under 2 in., inner diameter 3 in. Another nest which was being built in a bush on a precipitous hill-side just behind our house, about June 19, probably by the same pair of birds, was also deserted before eggs were laid.

In general appearance the eggs of this Bulbul resemble finely speckled examples of those of *Pycnonotus sinensis*. The eggs obtained on June 12 have a very pale mauve-white ground, and are covered with specks and short broad streaks of claret-colour over numerous underlying greyish-violet specks and broad streaks. Those taken on June 18 are pink, covered with spots, specks, and a few broad streaks of claret-red over underlying reddish-lilac spots and blotches. These seven eggs average  $0.99 \times 0.74''$ . The largest is  $1.05 \times 0.75''$ , the smallest  $0.95 \times 0.71''$ . The shape varies from ovate to longish ovate.

21. *BUCHANGA ATRA* (Herm.).

Styan, *Ibis*, 1891, p. 346.

Seen in May, September, and October. I do not think that it breeds near Chinkiang.

22. *CHIBIA HOTTENTOTTA* (Linn.).

Styan, *Ibis*, 1891, p. 346; La Touche & Rickett, *Ibis*, 1905, p. 34.

One example was seen on May 5, and another on May 15.

23. *ANORTHURA FUMIGATA* (Temm.).

Styan, *Ibis*, 1889, p. 445; 1891, p. 342.

This Wren winters in the neighbourhood of Chinkiang. Nearly all the birds that I have seen were on the banks of the narrow ponds which divide the hamlets in the plain from the paddy-fields. They lurked about the roots of the pollard willows, and when frightened hid in the hollow trunks or among brambles and stacked straw near the water. One, on being pursued, flew to the caves of a cottage and escaped under the thatch.

Three males, shot on February 23 and March 3, appear quite similar to specimens from Ichang given to me by Mr. Styan.

*Note.*—An example of the Wall-Creeper (*Tichodroma muraria*) was sent to me from N.W. Kiangsu by Father Perrin, S.J. There is no reason why this bird should not occur on the Chinkiang hills.

#### 24. LOCUSTELLA LANCEOLATA (Temm.).

Styan, *Ibis*, 1891, p. 340.

Very common on the grass-covered hills in May, and also seen in wheat-fields and damp sedge-fields during the same month. In September and October it is common enough on the grassy hills and in the lowlands. A late bird, flushed from some grass in a field on November 6, took refuge in a willow.

The soft parts, &c., of a female shot on May 27 are:—Iris brown; upper mandible black; lower mandible and gape pink, the lower mandible tipped with dark greyish; legs pinkish flesh-coloured. Total length 5.55 in.; wing 2.35 in.

#### 25. LOCUSTELLA CERTHIOLA (Pall.).

Styan, *Ibis*, 1891, p. 340.

I have met with this Grasshopper-Warbler but twice. On May 20 I found quite a number in a sedge-field on the plain, two of which I shot. The Fohkien collectors shot another there two days later. Again, on September 7, I put up three or four out of a ditch overgrown with reeds and high grasses. I suppose that they must visit us on passage every year, as elsewhere on the Lower Yangtse. The birds shot in May have the under parts white, with the flanks and the sides of breast olive-brown. One has traces of spots on the breast. Those seen in September appeared to have bright yellowish under parts.

#### 26. LOCUSTELLA FASCIOLATA (Gray).

A male in fine plumage and a female were shot on the hills by the collectors on May 28 and June 5. This species has not been recorded by Styan from the Lower Yangtse.



Swinhoe (under *L. insularis* Wallace, P. Z. S. 1871, p. 352) states that "it comes to Amoy in May in large numbers, and disappears again almost immediately, probably into the interior of China or beyond." Père David apparently did not meet with this Warbler. Neither Rickett nor I have observed it near Foochow or elsewhere in Fohkien. Seebohm ('Birds of Japan,' p. 72) states that "this species breeds near Lake Baikal and in the valley of the Amoor. It passes along the coasts of China and Japan on migration, to winter in the islands of the Malay Archipelago." I took the following notes on the male specimen mentioned above:— Iris rich brown; upper mandible blackish, edged with pink; lower mandible pink, suffused with plumbeous; legs dark flesh-coloured; claws much lighter flesh-coloured. Total length 7.30 in., bill 0.61 in., wing 3.20 in., tail 2.70 in., tarsus 1.02 in. Testes large. The ovary of the female was not very much developed.

27. *ACROCEPHALUS ORIENTALIS* (T. & S.).

Styan, Ibis, 1891, p. 340.

These Reed-Warblers arrive at the end of April in great numbers. They start building in May, and I have obtained full clutches on May 26 and 27. The majority of the first nests, however, do not contain the full number of eggs before the first week of June. Nest-building and laying goes on right through that month and also during July; for I have taken incubated eggs on July 1, and have had a fresh egg brought to me on July 11. There are, doubtless, several broods in the season. The outer shape of the nests is most variable; sometimes very little material is used, and sometimes the egg-cavity is sunk in a large quantity of weeds and grasses. They are generally attached to two or three reeds, occasionally to as many as five or six, this depending on how close the reeds grow, while they are built at a height of five or six feet from the ground. When the river is high and the reed-beds are flooded, the growth of the stems probably maintains them several feet above the water. The material employed consists of dry coarse and fine grasses,

roots, and water-weeds. The lining is of seeded grass-tops, generally of stripped reed-tops, which are of a bright yellow colour. The outer measurements of thirteen nests taken on May 26 and 27 and June 1, 3, and 6 vary from  $3\frac{1}{2}$  in. to 6 in. in height and from  $3\frac{1}{2}$  in. to  $4\frac{3}{4}$  in. in diameter. The inner measurements are: depth of cup 2 to 3 in. and diameter 2 to  $2\frac{1}{2}$  in.; the average measurements being roughly, depth of cup  $2\frac{1}{2}$  in., diameter  $2\frac{1}{4}$  in. The back wall of the nest is nearly always higher than the front, sometimes as much as 1 inch. The full clutch appears to vary from three to five. The most usual shape of the eggs is longish ovate, with both ends attenuated and approaching to oval. Some eggs are perfectly oval and some are truly ovate. An abnormal clutch taken on June 3 has two of the three eggs of a broad blunt ovate shape. The ground-colour is very pale greenish blue, or sometimes pale sea-green, and they are blotched, spotted, or speckled with different shades of umber-brown and dark purple over more or less apparent reddish-purple underlying marks, the brown spots having a greenish and *mossy* appearance. The eggs are very variable in size and markings, some being thickly blotched, while others are merely covered with small specks. Forty-six eggs average  $0.85 \times 0.62''$ . The longest measures  $0.91 \times 0.64''$ , the shortest  $0.78 \times 0.61''$ . The broadest is  $0.82 \times 0.67''$ , and the narrowest diameter (fairly common) is  $0.60''$ .

Some of the females taken along with the eggs and nests described above were assuming fresh plumage, some were in old faded dress, and one or two had newly moulted. Wing 3.06 to 3.18 in.

A male shot on May 5 and another on May 29 were assuming fresh plumage: wing 3.20 and 3.35 in. One shot on May 20 had bright new feathers, with the tail in moult: wing 3.30 in.

28. *ACROCEPHALUS BISTRIGICEPS* Swinhoe.

Styan, *Ibis*, 1891, p. 340.

Two examples were shot on May 21 in a sedge-field, and

others were seen there at the same time. I shot a very worn example on the 7th of September following.

*Note.*—I heard in summer in the reed-beds, on two or three occasions, a call-note and song which were either those of *A. bistrigiceps* or *A. agricola*; but I could not see the birds, and was unable to procure the nest. Styan states that both these species breed at Kiukiang, and I have no doubt that they will be found nesting among the Chinkiang reed-beds.

*Note.*—In 'The Ibis' for 1900, p. 51, I wrote in error that *Calamoherpe concinens* Sw. (= *A. agricola* Jerdon) was founded on examples of *A. agricola* collected by Père David near Peking. But I now find that Swinhoe described the bird from an example which he himself shot just outside Peking (P. Z. S. 1870, p. 432).

### 29. CISTICOLA CURSITANS Frankl.

*Cisticola cisticola* (Temm.) ; Styan, Ibis, 1891, p. 335.

The Fantail-Warbler is extremely abundant in summer about Chinkiang. It breeds both on the plains and on the grass-covered hills. The two or three nests which I have seen *in situ* were all empty and were shown to me by natives ; but a great number with eggs were brought to me during the summer of 1903, between June 18 and August 17. June appears, however, to be the principal breeding-time. There are doubtless several broods in a season. All the nests that I have seen were quite similar in shape and construction. They were in the form of a deep pear-shaped purse, made of the softest grass-down, felted together and secured by cobwebs to the grasses in the midst of which they were built. They were placed at heights varying from a few inches to a foot and a half from the ground. The supporting plant was in every case a clump of grass. The full clutch appears to consist of five or six eggs, usually six, but once a nest containing seven very small eggs was brought to me. A nest taken on June 20 contained, besides two fresh eggs, a Cuckoo's egg ; and another taken on June 28, with five eggs, had also a Cuckoo's egg in it. Both these

Cuckoos' eggs were, I have no doubt, those of the Common Cuckoo.

The eggs of the Fantail-Warbler procured at Chinkiang are white or bluish white, speckled, spotted, or blotched with light or dark brownish red (madder-brown) and reddish violet or reddish grey, the latter colour being either in the form of dark surface-marks or well-defined shell-spots. Of the nineteen clutches in my collection, eight are more or less finely speckled, eight are spotted or both spotted and speckled, while in the three others the spots are so large as to become blotches. In many cases the markings are chiefly disposed about the larger end of the egg. The blotched specimens have a ring of blotches round the large end, the rest of the shell being clear of marks save for a few spots or specks. My 86 eggs average  $0.60 \times 0.47''$ , the largest being  $0.65 \times 0.48''$  and the smallest  $0.55 \times 0.45''$ .

### 30. PHYLLOSCOPUS BOREALIS (Blas.).

Styan, Ibis, 1891, p. 339.

Common throughout May. It is the last of the Willow-Warblers to appear in spring. It passes again in September, but seems to be much less common during the autumn migration.

This Willow-Warbler, although generally arboreal in its habits, occasionally ventures down to the ground. On May 22, 1902, while strolling about the grounds of the Consulate, I noticed in a tree by the path a small bird, which, as I stood still to watch it, flew down to the bushes and high grass on the side of the walk, and thence to the path itself, where it remained hopping about for a short time, flying up now and then to catch a passing insect. From the path it flew back into the long grass and brush-wood, where it hunted for a considerable time, always keeping near the ground. As I managed to remain within a few yards of the bird, I had a very good view of it and could see that it was not *P. coronatus* nor *P. tenellipes*. The colouring was that of *P. borealis*, and the legs were dark, so that I could refer it to no other species.

The call of this Willow-Warbler, during its stay about Chinkiang, is a loud and sharp "tsic-tsic."

31. PHYLLOSCOPUS TENELLIPES Swinhoe.

This Warbler is apparently common during May. It frequents the undergrowth on the wooded hills. Only two out of thirteen examples shot between May 3 and 25 were females. The call, according to the collectors, is a loud "tic-tic."

Père David found this Willow-Warbler near Kiukiang on July 30, 1868 (Bull. Nouv. Arch. Mus. Paris, vol. viii. p. 50).

32. PHYLLOSCOPUS CORONATUS (Temm.).

Styan, Ibis, 1891, p. 339.

This Willow-Warbler appears about April 20, and is extremely abundant during May. I have obtained a specimen as late as May 26. The short but pleasant song is constantly heard during that month.

33. PHYLLOSCOPUS SUPERCILIOSUS (Gm.).

Styan, Ibis, 1891, p. 339.

Very abundant from about April 20 to May 20. It passes again in September.

34. PHYLLOSCOPUS PROREGULUS (Pall.).

Styan, Ibis, 1891, p. 339.

I shot a single specimen one year on November 24, in a wood among the hills; and another year, on October 24, I saw a number flying about some gardens and copses on the plain. I have not noticed this species in spring.

35. CETTIA CANTURIENS (Swinhoe).

*Cettia canturiens* (Sw.) and *Cettia minuta* (Sw.), Styan, Ibis, 1891, pp. 340, 341.

The difference in size between males and females of this Bush-Warbler is considerable, and induced Swinhoe to describe the female under the name of *Arundinax minutus* ('Ibis,' 1860, p. 52). Owing probably to the want of correctly-sexed specimens, the mistake has stood uncorrected for forty-five years! As, during all the years that I had

collected birds in China, no female specimens of *C. canturiens* had come under my notice, I began a few years ago to suspect that some mistake had been committed in the identification of these birds. I had seen and collected the so-called *C. minuta* in Formosa, but only in winter, and the three specimens which I shot I determined doubtfully as females. During the first year that I was at Chinkiang I shot a couple of these *Cettia minuta*, both undoubted females, but no females of the larger bird; so that when Rickett sent me our Folkien men in 1902, I gave them special instructions to look for nests of *C. canturiens*, and to secure in every case the female and also the male, if possible. This was done. The collectors shot at the nest several females, and in one case both male and female. The females shot by our men in no wise differ from my specimens of *C. minuta* from Formosa, nor from the two females already shot by me at Chinkiang; while the male shot at the nest in company with one of the females is an undoubted *C. canturiens*. To complete the evidence, Rickett and I, in June 1905, looked through the series of *C. minuta* in the British Museum, and ascertained that they were identical with my specimens. All but one or two of the sexed specimens of *C. canturiens* and *C. minuta* in the B.M. collection are marked ♂ and ♀ respectively. The exceptions are no doubt due to error in sexing. *Cettia canturiens* Swinhoe and *C. minuta* Swinhoe are therefore but the male and female of one species—*Cettia canturiens* Sw.

Fifteen males from Formosa, Folkien, and Chinkiang vary in length of wing from 2·83 in. to 3·05 in., and ten females from Formosa and Chinkiang from 2·25 in. to 2·46 in.

*Cettia cantans minuta* from Formosa is probably also *C. canturiens* ♀, but I have only one example of this bird, sexed doubtfully as a male.

Swinhoe wrote (P. Z. S. 1863, p. 36) of *C. minuta* that it is entirely distinct in manners and song (from *C. canturiens*). Most probably he took the song of *C. sinensis* of S. China to be that of his *C. minuta*, both *C. canturiens* and *C. sinensis*

being often found breeding in the same localities. The eggs and nest attributed by him to *C. minuta* ('Ibis,' 1863, p. 82) are evidently those of *Suthora bulomachus*.

*Cettia canturiens* arrives at Chinkiang in the beginning of April, and by the end of that month is extremely common on the hills by the outskirts of woods and among thick scrub, or anywhere in the valleys where suitable cover occurs. During the nesting-season the males may be seen in the evening perched on the topmost twigs of bushes, singing lustily; but the females are very difficult to observe and creep about the bushes, seldom shewing themselves. Breeding takes place in May and June. I have taken, obtained, or seen nests on the following dates:—

1900: 20th May (5 eggs, incubated). 1901: 12th May (3 eggs, clutch incomplete); 26th May (new nest, empty); 10th June (3 nests, with 5, 5, 4 eggs, incubated). 1902: 13th May (5 eggs, addled or much incubated); 13th May (5 eggs, somewhat incubated; ♀ shot at nest); 13th May (5 eggs, somewhat incubated; ♂ ♀ shot at nest); 15th May (4 eggs, fresh); 15th May (5 eggs, nearly fresh; ♂ shot at nest); 15th May (4 eggs, hatching; ♀ shot at nest); 19th May (5 eggs, fresh; ♀ shot at nest); 24th May (4 eggs). 1903: 10th May (2 eggs, not taken); 28th June (2 eggs, fresh).

The first nest on this list was taken by me from a bush in a ditch. The empty nest, the eight nests taken in 1902, and that taken on May 10th, 1903, were found among thick scrub on the hills, and were built in low bushes not far from the ground. The nest of this *Cettia*, like that of *C. sinensis*, is domed, with a side or rather front entrance. It is made of blades of coarse grasses, bamboo-leaves, and a few dead leaves of oak &c., while it is lined with fine grass-stems, fine stripped grass-tops, and occasionally a few feathers. The structure is very fragile, and on being handled soon falls to pieces. Seven nests measure as follows:—Outer height from 5 to 7 in.; outer diameter, on average, about 4 in.; from base of nest to base of aperture from  $3\frac{1}{2}$  to  $4\frac{1}{2}$  in.

The aperture, which is near the top of the nest, is about 2 in. broad and from  $1\frac{1}{4}$  to  $1\frac{1}{2}$  in. high. Inside, the height is about 4 in., but in one nest it is only 3 in. and in another as much as  $4\frac{1}{2}$  in. The depth of the egg-cavity (from bottom of cup to base of aperture) varies from  $1\frac{3}{4}$  to 3 in. The inner diameter averages  $2\frac{1}{4}$  in., but one nest has an inner diameter of only 2 in., while in another this measures  $2\frac{1}{2}$  in. Five or sometimes four eggs make a full clutch. In shape the eggs are generally ovate, but they are often oval with either blunt or somewhat pointed ends. All but one of the clutches collected are glossy. There is a good deal of variation in the colouring, light red of a somewhat "old pink" tint being by far the most common; but very bright brick-red and dark dull brick-red clutches are found. There is often a darker ring or a cap on the larger end, and sometimes darker specks or a stippling of less dark specks all over the egg. Fifty-five eggs average  $0.78 \times 0.58''$ ; the largest is  $0.82 \times 0.61''$  and the smallest  $0.71 \times 0.57''$ .

36. *CETTIA SINENSIS* La Touche, Ibis, 1899, p. 207.

*Cettia fortipes* (Hodgson); Styan, Ibis, 1891, p. 341.

Common on the higher hills during the breeding-season. Three specimens shot on March 28, May 13, and June 20 do not differ from others from Folkien. I could not procure any nests at Chinkiang.

37. *SUYA CRINIGERA* Hodgson.

Styan, Ibis, 1891, p. 335.

Resident on the hills, but not common. I have seen it in woods and in pine-plantations, and during autumn and winter a party used often to appear among the bushes on the cliff just at the back of our garden.

[To be continued.]